

*Please provide the following information, and submit to the NOAA DM Plan Repository.*

**Reference to Master DM Plan (if applicable)**

*As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.*

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

**1. General Description of Data to be Managed****1.1. Name of the Data, data collection Project, or data-producing Program:**

C-CAP Santa Cruz 2001 era High Resolution Land Cover Metadata

**1.2. Summary description of the data:**

This dataset represents land cover for the San Lorenzo River basin in Santa Cruz County, California derived from high resolution imagery. The land cover features in the imagery were classified to the Coastal Change Analysis Program (C-CAP) classification scheme. Land cover data was derived through a combination of image processing methods including image segmentation and rule-based techniques available from the eCognition software package, and more traditional "cluster-busting" methods. In 2008, additional processing was applied to the land cover to make the data set more consistent with what is being distributed as a part of the High Resolution C-CAP effort.

**1.3. Is this a one-time data collection, or an ongoing series of measurements?**

One-time data collection

**1.4. Actual or planned temporal coverage of the data:**

2001-11-01

**1.5. Actual or planned geographic coverage of the data:**

W: -122.204924, E: -121.958152, N: 37.260222, S: 36.94746

**1.6. Type(s) of data:**

*(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)*  
Map (digital)

**1.7. Data collection method(s):**

*(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, numerical model, etc.)*

**1.8. If data are from a NOAA Observing System of Record, indicate name of system:**

**1.8.1. If data are from another observing system, please specify:****2. Point of Contact for this Data Management Plan (author or maintainer)****2.1. Name:**

NOAA Office for Coastal Management (NOAA/OCM)

**2.2. Title:**

Metadata Contact

**2.3. Affiliation or facility:**

NOAA Office for Coastal Management (NOAA/OCM)

**2.4. E-mail address:**

coastal.info@noaa.gov

**2.5. Phone number:**

(843) 740-1202

**3. Responsible Party for Data Management**

*Program Managers, or their designee, shall be responsible for assuring the proper management of the data produced by their Program. Please indicate the responsible party below.*

**3.1. Name:****3.2. Title:**

Data Steward

**4. Resources**

*Programs must identify resources within their own budget for managing the data they produce.*

**4.1. Have resources for management of these data been identified?****4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):****5. Data Lineage and Quality**

*NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information which it disseminates.*

**5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible**

*(describe or provide URL of description):*

Process Steps:

- 2002-06-01 00:00:00 - Initial field sampling to identify features in the field that

corresponded to the modified C-CAP classification scheme. GPS units were taken into the field, along with laptops equipped with FieldNotes software, to collect and record reference data points across the study area.

- 2002-06-01 00:00:00 - Special transformations of IKONOS imagery were derived to increase the data set dimensionality. This was achieved by calculating the Normalized Difference Vegetation Index (NDVI), Principal Component Images (PCA), and Tasseled-Cap Brightness, Greenness & Wetness images from the raw multi-spectral IKONOS imagery. These images were compiled using the layer stack operation in ERDAS Imagine 8.5 to produce one image with multiple band layers.

- 2002-06-01 00:00:00 - Classifications techniques were performed on all four IKONOS layer-stacked scenes using eCognition and ERDAS Imagine 8.5 software. Image segmentations derived from the imagery were used to perform supervised classifications with eCognition. Preliminary classifications were then exported from eCognition as ERDAS Imagine files (.img) to be further processed in Imagine 8.5. Each class from the exported eCognition classifications were used as individual "masks" in Imagine to help refine the overall classification. This refinement was achieved by iterative isodata clustering, or "cluster-busting," on each masked class image. All individual class images were then recoded and merged to represent the modified C-CAP classification scheme.

- 2002-06-01 00:00:00 - The final step in the creation of the land cover data involved the use of hand editing. This approach involved the use of ancillary data sources in conjunction with the IKONOS data set. This methodology was employed to increase the accuracy of rare classes not easily derived from the IKONOS imagery alone.

- 2008-06-09 00:00:00 - Land cover classes were recoded to match current land cover scheme. A new set of image objects were derived from the IKONOS MS imagery using a scale factor of 50. The existing recoded land cover was summarized using the image objects as zones. The image objects were labeled using the zonal majority land cover.

- 2008-06-12 00:00:00 - The impervious surface class from the original land cover were refined using a clump and eliminate to reduce speckle in the map. Roads data were also burned in where incomplete or obscured roads existed. The new impervious surface class was inserted into the map derived from process step 5.

- 2008-07-11 00:00:00 - The final map was then manually edited by NOAA OCM analysts.

**5.1.1. If data at different stages of the workflow, or products derived from these data, are subject to a separate data management plan, provide reference to other plan:**

**5.2. Quality control procedures employed (describe or provide URL of description):**

## **6. Data Documentation**

*The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented,*

*specifies the use of ISO 19115 and related standards for documentation of new data, and provides links to resources and tools for metadata creation and validation.*

**6.1. Does metadata comply with EDMC Data Documentation directive?**

No

**6.1.1. If metadata are non-existent or non-compliant, please explain:**

Missing/invalid information:

- 1.7. Data collection method(s)
- 3.1. Responsible Party for Data Management
- 4.1. Have resources for management of these data been identified?
- 4.2. Approximate percentage of the budget for these data devoted to data management
- 5.2. Quality control procedures employed
- 7.1. Do these data comply with the Data Access directive?
- 7.1.1. If data are not available or has limitations, has a Waiver been filed?
- 7.1.2. If there are limitations to data access, describe how data are protected
- 7.3. Data access methods or services offered
- 7.4. Approximate delay between data collection and dissemination
- 8.1. Actual or planned long-term data archive location
- 8.3. Approximate delay between data collection and submission to an archive facility
- 8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

**6.2. Name of organization or facility providing metadata hosting:**

NMFS Office of Science and Technology

**6.2.1. If service is needed for metadata hosting, please indicate:**

**6.3. URL of metadata folder or data catalog, if known:**

<https://www.fisheries.noaa.gov/inport/item/48359>

**6.4. Process for producing and maintaining metadata**

*(describe or provide URL of description):*

Metadata produced and maintained in accordance with the NOAA Data Documentation Procedural Directive: [https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC\\_PD-Data\\_Documentation\\_v1.pdf](https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC_PD-Data_Documentation_v1.pdf)

**7. Data Access**

*NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides information about resources and tools to enable data access, and includes a Waiver to be submitted*

*to justify any approach other than full, unrestricted public access.*

**7.1. Do these data comply with the Data Access directive?**

**7.1.1. If the data are not to be made available to the public at all, or with limitations, has a Waiver (Appendix A of Data Access directive) been filed?**

**7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:**

**7.2. Name of organization of facility providing data access:**

NOAA Office for Coastal Management (NOAA/OCM)

**7.2.1. If data hosting service is needed, please indicate:**

**7.2.2. URL of data access service, if known:**

<https://coast.noaa.gov/dataviewer/#/imagery/search/where:ID=373>

**7.3. Data access methods or services offered:**

**7.4. Approximate delay between data collection and dissemination:**

**7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:**

**8. Data Preservation and Protection**

*The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.*

**8.1. Actual or planned long-term data archive location:**

*(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To Be Determined, Unable to Archive, or No Archiving Intended)*

**8.1.1. If World Data Center or Other, specify:**

**8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:**

**8.2. Data storage facility prior to being sent to an archive facility (if any):**

Office for Coastal Management - Charleston, SC

**8.3. Approximate delay between data collection and submission to an archive facility:**

**8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?**

*Discuss data back-up, disaster recovery/contingency planning, and off-site data storage relevant to the data collection*

**9. Additional Line Office or Staff Office Questions**

*Line and Staff Offices may extend this template by inserting additional questions in this section.*